

AMERICAN SOCIETY FOR TESTING MATERIALS



~ BULLETIN ~

ENGINEERS' CLUB BUILDING.

1315 SPRUCE ST.

PHILADELPHIA, PA.

NUMBER 7

OCTOBER 31, 1922

Current Society Publications

The Society will issue this year three regular publications. The current YEAR BOOK and the 1922 Supplement to the BOOK OF A.S.T.M. STANDARDS were distributed to the members in September. The PROCEEDINGS (Vol. 22), about 1650 pages, will be ready for distribution in December. They will be the largest ever published and will contain reports, papers and discussions of outstanding importance and value.

Special Publications

Book of A.S.T.M. Tentative Standards.—The 1922 book (774 pp.) is the largest edition of this volume issued by the Society. It is the only book containing all of our 163 tentative standards and is therefore a most convenient volume for those who use A.S.T.M. specifications and methods. The book was described in Circular No. 171, September 13, and about 500 members have ordered copies. Unquestionably many other members desire a copy of this volume and it would be appreciated if they would place their orders promptly with the Secretary-Treasurer. The special prices to members are \$4.50 in paper binding and \$5.50 in cloth binding. Orders can be filled immediately.

Index of Proceedings, Vols. XIII-XX.—An Index of the Proceedings from 1913 to 1920 is now being prepared (supplementing the index of Proceedings to 1912) and in accordance with previous announcements will be furnished at cost to members who desire copies. About 600 members have already ordered copies, but it is confidently believed that there are many other members who desire this Index, which covers a period of important investigations and developments in the study of materials and specifications. Therefore, opportunity is now accorded to all members who have not yet placed their order to do so. The special price (at cost) to members is \$1.75 per copy in cloth binding and \$2.75 in half-leather binding. The Index will be ready for distribution about January 1, 1923.

A List of Alloys.—A comprehensive List of Alloys (confined largely to the non-ferrous alloys) has been prepared by Dr. William Campbell for Committee B-2 on Non-Ferrous Metals and Alloys. The alloys, 1550 in number, are arranged by groups (e. g., brasses, bronzes, tin and lead base alloys, etc.) and complete chemical compositions are given. While the List will appear in the current PROCEEDINGS, it is believed there will be a very general demand for copies in separate pamphlet form, and these will be furnished at the price of \$1.00 per copy. The List will be ready for distribution in December, but it is requested that orders be placed at once.

1923 Annual Meeting

The Executive Committee has voted to hold the 1923 Annual Meeting of the Society at Atlantic City in the latter half of June, provided satisfactory arrangements can be made for the meeting. Two dates of meeting are tentatively under consideration:

1. During the last week of June, i. e., June 25-29.
2. Immediately following the meeting in Atlantic City of the American Railway Association—which is customarily held from Thursday to Wednesday about the middle of June.

In connection with the latter plan it has been pointed out that such an arrangement would be convenient to many of our members who regularly attend meetings of the American Railway Association. Negotiations are now under way with several Atlantic City hotels and detailed announcements will appear in the January BULLETIN.

As stated in its last annual report, the Executive Committee has the matter of rotation of annual meetings under careful consideration. It will be recalled that the Committee on Papers and Publications suggested that consideration be given to the desirability of holding annually two meetings of the Society, one to be held as usual in June for the consideration of standards and tentative standards, and a mid-winter meeting, which could be a technical session for the consideration of papers on testing and research. Should conditions in time make it desirable to hold two meetings a year, the matter of rotation of meetings could be well provided for by holding the summer meeting at a seashore resort on the Atlantic seaboard (which is clearly the desire of a majority of those members who have expressed their views) and alternating the midwinter meeting between various inland districts. The Executive Committee is therefore studying these suggestions with respect to their mutual relation and in the meantime deems it desirable to adhere to the existing policy with respect to meetings.

Special Notice

Members who desire to order copies of the special publications described in the adjoining column or complete sets of Proceedings (see page 5) are requested to do so promptly, using for that purpose the enclosed

ORDER BLANK FOR SPECIAL PUBLICATIONS

American Engineering Standards Committee.

Past-President C. D. Young has been appointed to represent the Society on the American Engineering Standards Committee to fill the unexpired term of the late A. W. Gibbs. Past-President A. A. Stevenson has also been re-appointed for a term of three years, and the Society's representatives are now C. D. Young, J. A. Capp and A. A. Stevenson.

Messrs. F. M. Waring and J. J. Shuman have been appointed to represent the Society on the Sectional Committee on Standardization of Shafting which is organized under the sponsorship of the American Society of Mechanical Engineers. The Secretary-Treasurer has been appointed to represent the Society on the Sectional Committee on Safety Code for Compressed Air Machinery.

A.S.T.M. Standards Submitted.—The Society has now submitted to the American Engineering Standards Committee forty-two A.S.T.M. standards for approval; of these, one, the Standard Specifications and Tests for Portland Cement, has been approved as American Standard, thirteen have been approved as Tentative American Standard, and the remaining twenty-eight are now under consideration for approval as Tentative American Standard. The latter include eleven specifications for steel products, among them blooms, forgings, axles, bars for railway springs, springs for railways, and steel pipe; four for wrought-iron products, including pipe, bars, plates and staybolt and engine-bolt iron; and two for linseed oil. There are also included eleven standard methods, including chemical analysis of alloys of lead, tin, antimony and copper, tests for unit weight and voids of aggregate for concrete and organic impurities in sands for concrete, penetration of bituminous materials, general methods of testing cotton fabrics, tests for flash point of volatile flammable liquids, routine analyses of paint pigments, and sampling and analysis of coke. The Society has indicated its preparedness to act as sponsor for all of these standards. In addition, the Executive Committee is preparing to submit twenty additional standards formally released for the purpose by the respective standing committees.

The Society has been designated as joint sponsor with the U. S. Department of Agriculture for Standard Specifications for Drain Tile, the A.S.T.M. specifications for this product having previously been approved as Tentative American Standard. Application has furthermore been made for sponsorship for Methods of Testing Textile Materials, for Methods of Testing Petroleum Products and Lubricants, and for Specifications for Fire Tests of Materials and Construction.

Methods of Testing Wood.—Satisfactory progress is being made in the formation of the Sectional Committee on Methods of Testing Wood, for which the A.S.T.M. and the U. S. Forest Service are joint sponsors. All national organizations, both of producers and consumers, that have any interest in this subject have been consulted and many of them have appointed representatives on the committee. It is probable that the sponsors will be able to call a meeting of the Sectional Committee for organization early in December. Arrangements are being made for direct contact with the Sectional Committee of the Society's Committee D-7 on Timber, in that the three members of its Sub-Committee on Methods of Testing, L. J. Markwardt, C. E. Paul and M. O. Withey, will be members of the Sectional Committee. Mr. Withey has been formally designated as the A.S.T.M. representative.

At a recent meeting of the Executive Committee the following were re-appointed as representatives of the Society on the Committee on Non-Ferrous Alloys Advisory to the U. S. Bureau of Standards: W. H. Bassett, William Campbell, G. H. Clamer, N. K. B. Patch and W. R. Webster. The committee met in Washington on October 31.

Mr. J. A. Capp has been re-appointed as the Society's representative on the Engineering Division of the National Research Council, for a term of two years.

Federal Specifications Board.

During the present Federal administration there has been organized the Federal Specifications Board to unify the specifications of the various departments and independent establishments of the Government. The procedure that will be followed by this Board has been outlined as follows:

1. Decision by Executive Committee as to necessity for standard specifications in the case of a particular article or class of articles.

2. When specifications are desired the question will be referred by the Executive Committee to a technical committee composed of experts in the particular subject for consideration of existing specifications (or the inauguration of their preparation if suitable ones do not exist), with a view to recommending to the Executive Committee of the Federal Specifications Board the specifications best suited for Government uses.

3. Consideration by the Executive Committee of the report of the technical committee and the decision as to what specifications shall be recommended for adoption.

4. Submission of recommended specifications to the various departments and independent establishments through their representatives on the Federal Specifications Board, for comment and criticism.

5. Final adoption of the recommended specifications by the Federal Specifications Board.

6. Promulgation. (Method to be determined in each case.)

At the time that recommended specifications are submitted to the various Government departments for comment and criticism they are also being referred informally to the American Engineering Standards Committee, which is able, through its intimate contact with industrial and technical organizations, to secure comments and suggestions regarding the specifications from qualified individuals and organizations. In this way several specifications for materials, such as rubber hose, numbered cotton duck and pig lead, have been submitted to the A.S.T.M. and referred to individual members for comment. It is expected that many more specifications will be referred to us in this way.

The organization and activities of the Federal Specifications Board mark an important step in the development of standards that will be satisfactory alike to Government and all interested national organizations.

Simplified Practice.

It will be recalled that the Executive Committee in its 1922 annual report referred to the organization of the Division of Simplified Practice in the U. S. Department of Commerce, for the purpose of aiding the industries of the country in the elimination of waste, notably through the simplification of practice, such as the reduction of the number and variety of sizes of manufactured products. A recent statement issued by the Division points out that simplified practice will decrease stocks, production costs, selling expenses, misunderstandings and all costs to the user, and at the same time will increase turnover, stability of employment, promptness of delivery, foreign commerce, quality of product, and profit to producer, distributor and user.

The Division does not attempt to determine simplifications which the industries should adopt, its function being to bring together all interests and to support such actions as these interests may mutually agree upon.

The various member bodies of the American Engineering Standards Committee have been requested to propose specific subjects for which simplification would be an advantage to industry. It is planned to address the officers of our various standing committees requesting them to bring this matter before their committees and to transmit any suggestions for projects to the Executive Committee. Our Society has proposed one project, that of reducing the number of standard sizes of drain tile, a matter which is now under active consideration in Committee C-6 on Drain Tile.

Individual suggestions from the members in this matter will be welcomed by the Executive Committee.

Tests to Determine Practicability of Requirements in Concrete Specifications of Joint Committee.

The Joint Committee on Standard Specifications for Concrete and Reinforced Concrete, consisting of representatives of the American Society of Civil Engineers, the American Railway Engineering Association, American Concrete Institute, Portland Cement Association and the American Society for Testing Materials, has accepted a proposal of a committee of contractors representing the Associated General Contractors of America that field and laboratory tests be conducted to determine the practicability of the recommendations of the Joint Committee in its Tentative Specifications for Concrete and Reinforced Concrete published in the Society's PROCEEDINGS for 1921, especially in so far as they relate to control of the quality of concrete produced under field conditions. It is at present planned to conduct the tests in conjunction with the construction of a reinforced concrete building in the New York City district, with the possibility eventually of making similar tests on buildings in other cities. The Joint Committee, without expense to itself, will have advisory supervision of the tests under the auspices of a committee of contractors; it will approve the program of tests and the personnel of those who are to supervise and make the tests.

Although final plans have not yet been approved, it is contemplated to divide the tests broadly into field tests and auxiliary and laboratory tests. The field tests will be designed to establish (1) uniformity of workability or consistency of concrete throughout the work, (2) uniformity of the strength of concrete obtained throughout the work, and (3) relation of the strength of field test pieces to the strength of concrete in the structure. The auxiliary and laboratory tests are divided into four series: (1) the relation of strength of field-made test pieces to theoretical strength of mixtures used; (2) comparison of strength of field-made test pieces with laboratory test pieces; (3) relative value of cores of different diameters and heights, and (4) comparative tests of different brands of cement used.

This investigation marks an important step in the study of concrete and reinforced concrete, and if carried out on the comprehensive scale planned will undoubtedly contribute information of much value for consideration in the further development of these specifications.

The investigation will be of particular interest to our Society because the methods of testing to be used are those developed by the A.S.T.M. and incorporated in the tentative specifications in question.

Society Represented at International Engineering Congress in Brazil.

The Society has accepted the invitation of the Brazilian Government to be formally represented at the International Engineering Congress at Rio de Janeiro, being held at the present time in conjunction with the Brazilian International Exposition in celebration of the centennial of Brazilian independence. Mr. W. E. Emley, who is attending the Congress as a representative of the U. S. Bureau of Standards, is the formal representative of the Society.

There will be exhibited at the Congress a complete set of the Society's publications, which Mr. Emley will afterwards present with the compliments of the Society to the Club de Engenharia. In view of the increasing extent to which A.S.T.M. standards are used today in Brazil for the purchase of engineering materials in this country, it is believed that the Society's publications will be of help in establishing closer commercial relations with Brazil and other South American countries. The importance of this movement is further seen in the plans of the Department of Commerce to translate forty representative A.S.T.M. specifications into Portuguese for distribution in Brazil through the consular offices.

Standardization in the Lumber Industry.

A standardization movement of great import has recently developed in the lumber industry. Beginning with the first American Lumber Congress in 1919, this movement within the industry for simplification and general standardization of lumber sizes and grades culminated in a conference in May, 1922, called under the auspices of the U. S. Department of Commerce, at which lumber manufacturers, wholesalers, retailers and consumers were represented. As an outcome of these conferences, "the lumbermen of the United States have themselves assumed the responsibility of establishing and maintaining the lumber trade upon a high plane of efficiency and of ethical practice. To accomplish this the lumber industry has established the Central Committee on Lumber Standards, representing the entire organized lumber trade from producer to consumer and created by a general conference of lumber manufacturers, distributors and consumers in July, 1922, following a similar conference in Washington in May, 1922, and a series of lumber standardization conferences—national, state and local, held during the last three years."

The Central Committee on Lumber Standards referred to is at present composed of seven members, three representing lumber manufacturers, one representing lumber wholesalers, one lumber retailers, one the Association of Railway Executives, and one the architects. The declared function of this committee is "to act as a steering organization to draft and submit to its constituent associations its best judgment of suitable ways and means to accomplish in practice the simplification of lumber grades; the standardization of lumber sizes; the certification of quantity and quality; and the enforcement, by means of association inspection service and, if practicable, by grade marking, of definite standards of lumber sizes and grades."

The committee met in Washington on October 3-6, at which its program was outlined and some constructive work accomplished. It has been determined to create a Consulting Committee consisting of men appointed by national organizations interested in this program to prepare appropriate data and suggestions for consideration of the Central Committee.

The Executive Committee of the Society has been following this movement with much interest, and the Society has been represented at some of the conferences. Our Committee D-7 on Timber is fully informed and has offered its cooperation and services in forwarding the movement in so far as possible.

Cooperation With American Foundrymen's Association.

The Society and the American Foundrymen's Association, through their governing boards, have reached an agreement on details of cooperation between the two societies with respect to specifications and methods of test of mutual interest. As a first step the A. F. A. will be elected to membership on those A.S.T.M. committees dealing with materials in which the A. F. A. are interested. The committees of the A. F. A. will function by reviewing A.S.T.M. standards, either recommending endorsement or submitting criticism. In the case of tentative standards, endorsement will be deferred until their adoption as standard, and in the meantime any criticisms will be submitted to the A.S.T.M. committees. Should the A. F. A. desire to publish the A.S.T.M. standards they have endorsed, the publication will take the form of such an endorsement, the standards being printed under the A.S.T.M. titles.

The A. F. A. is now represented on the following committees:

- A-1 on Steel—A. H. Jameson
- A-3 on Cast Iron—H. B. Swan
- A-4 on Heat Treatment of Iron and Steel—H. A. Neel
- A-5 on Corrosion of Iron and Steel—H. Y. Carson
- A-7 on Malleable Castings—Enrique Touceda
- B-2 on Non-Ferrous Metals and Alloys—L. W. Mueller
- D-5 on Coal and Coke—R. S. MacPherran
- E-4 on Metallography—H. A. Schwartz

The A. F. A. has also asked for membership on Committee C-8 on Refractories.

A.S.T.M. BULLETIN

Issued January, April, July and October
by the

AMERICAN SOCIETY FOR TESTING MATERIALS
Engineers' Club Building, 1315 Spruce St., Philadelphia, Pa.

President
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Vice-Presidents

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(Term Expiring in 1923)

WILLIAM H. WALKER
(Term Expiring in 1924)

Secretary-Treasurer
C. L. WARWICK

Members of Executive Committee
(Term Expiring in 1923)

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E. D. BOYER

F. M. FARMER
W. H. FULWEILER

(Term Expiring in 1924)

D. M. BUCK
W. M. CORSE

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Past-Presidents

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(Term Expiring in 1923)

GEORGE S. WEBSTER
(Term Expiring in 1924)

C. D. YOUNG
(Term Expiring in 1925)

Assistant Treasurer
J. K. RITTENHOUSE

Assistant to the Secretary
R. E. HESS

Number 7

October 31, 1922

Society Membership

The membership of the Society as this BULLETIN goes to press is 3104. The number of new members acquired since the first of the year is 322, which is approximately the same as for 1921 but below the record for 1920. In the face of the business depression of the past two years it was to be expected that the normal growth of the Society's membership would fall off to some extent. Moreover, business conditions undoubtedly account for the increased number of resignations and delinquencies of the past two years, which has materially affected the net yearly growth.

Healthy growth of membership is considered by the Executive Committee to be an essential to continued vitality of the Society's work. Three principal means have been employed to stimulate Society growth: (1) Placing application blanks for membership in Society publications; (2) enlisting the interest and aid of the members, sending them application blanks from time to time for their use in securing new members; and (3) activities directed immediately from the Secretary-Treasurer's office, invitations extended in the course of correspondence, organization of new committees, etc. These have been supplemented on occasion by special efforts, such as personal letters from the Secretary-Treasurer to committee members.

The Executive Committee, after carefully reviewing the situation, is of the opinion that the time is opportune for supplementing these means by instituting a definite program for increase of membership, the basis of which is to be the committee organization of the Society. We have forty standing committees each dealing with some material of engineering and thus closely related to one or more industries. The plan is to secure the interest and active services of our standing committees and their members individually for increasing the Society membership among those industries with which they are in touch. The Executive Committee has placed the development of this matter in the hands of a Membership Committee, consisting of Past-President C. D. Young, chairman, F. M. Farmer, W. K. Hatt and the Secretary-Treasurer, and counts confidently on the support

not only of the standing committees and their members but individually of the entire Society membership.

There has recently been prepared in the Secretary-Treasurer's office a complete industrial classification of the Society membership, which will be of assistance in this work. The classification is under fifty heads, and a general summary is here given. When one considers the magnitude of many of the industries here named, this list is convincing evidence of the possibility of extending the Society membership in many industries on a sound healthy basis, that is, by securing members who will be interested in our work, who will desire to

INDUSTRIAL CLASSIFICATION OF MEMBERSHIP.

Apparatus.....	33	Gypsum.....	14
Architects and Architectural	47	Insulation.....	14
Asbestos and Magnesia....	5	Iron and Steel Manufactur-	
Asphalt and Bitumen.....	25	ing.....	228
Associations.....	75	Iron and Steel Products....	189
Automotive and Aeronautic	58	Journals and Editors.....	23
Belting.....	5	Leather.....	6
Bolts, Nuts and Rivets....	13	Libraries.....	46
Brick.....	19	Lime.....	15
Cement Manufacturing.....	111	Machinery, Tools and Hard-	
Cement and Concrete Prod-		ware.....	82
ucts.....	19	Municipal Departments....	57
Chemicals.....	30	Non-Ferrous Metals and Al-	
Clay.....	29	loys.....	128
Coal, Coke and Gas.....	42	Paper.....	6
Construction.....	67	Petroleum and Lubricants..	128
Educational.....	212	Preservative Coatings....	113
Electrical.....	62	Public Utilities.....	65
Engineers.....	283	Railroads.....	148
(Consulting Engineers,		Railroad Equipment.....	46
Chemists, Metallurgists,		Refractories.....	32
etc.).....		Road Material.....	24
Explosives.....	20	Rubber.....	47
Federal Government:		Shipping and Shipbuilding..	17
(a) Army.....	14	State Departments:	
(b) Navy.....	24	(a) Highway.....	70
(c) Bureau of Stand-		(b) All others.....	14
ards.....	46		84
(d) Bureau of Mines.....	7	Testing Laboratories.....	72
(e) Bureau of Public		Textiles.....	37
Roads.....	13	Timber.....	26
(f) Forest Products		Waterproofing.....	11
Laboratory.....	16	Wire and Cable.....	35
(g) Miscellaneous.....	13	Unclassified:	
	123	(a) Difficult to Clas-	
Foreign Governments.....	12	sify.....	51
Foundries.....	94	(b) No data available	59
Glass.....	5		110

Total..... 3,192
Less duplications (associations, etc.)..... 88

Total membership October 26, 1922..... 3,104

have our publications, and who may wish also to render service on our committees.

It will be some time before these plans can be put into effect. The Executive Committee in the meantime urges each member to take this question of Society membership to heart and secure at least one new member as the immediate result of this appeal. An application blank is enclosed and it should be emphasized that although the year is drawing to a close, new members by paying the full membership dues will receive a complete set of the 1922 publications, including the Book of A.S.T.M. Standards.

DON'T FORGET ABOUT THAT NEW MEMBER.

Addresses Wanted

Persons who know the present addresses of the members whose names and last known addresses are given below, are asked to advise the Secretary-Treasurer.

JOHNSTON, THOMAS J. Aeronautical Material Testing Engineer, Chief, Material Testing Branch, Material Section, Engineering Division, McCook Field, Dayton, O.

KLECKNER, WILLIAM R. Sales Manager, National Slag Co., 1235 Turner St., Allentown, Pa.

SANDE, ARTHUR. Consulting Engineer, 2212 S. Sixteenth St., Philadelphia, Pa.

SMITH, P. L. 350 Hampshire St., Buffalo, N. Y.

WARREN, JOHN M. 1483 McGuffey Road, Youngstown, O.

New Members Elected Since Annual Meeting

Sixty-four new members have been elected since the annual meeting, as follows:

Allen, A. D.	Library, South Manchuria Railway Co.
Amadon, C. H.	Liedeker, M.
Austral Bronze Co., Ltd.	Mills, P. A.
Australian Chemical Institute.	Morris, H. C.
Bantrell, M. A.	Morris, L. R.
Barr, H. L.	Muller, Julius
Bear Tractors, Inc.	Onondaga Pottery Co.
Berkeley, W. N.	Penn Iron and Steel Co.
Brennen, W. J.	Perry, D. S.
Davis Brake Beam Co.	Phillips Elec. Wks., Ltd., E. F.
Camp, H. W.	Pittsburgh Testing Lab., Chicago Branch.
Cooper, Arthur	R. R. Buyers' and Sellers' Service Bureau
Dept. of Scientific and Industrial Research, London	Raw Material
Dillman, G. C.	Rice, W. P.
Dix, T. W.	Ritter, H. G.
Driscoll, James	Robert, J. H.
Earle, Ltd., G. and T.	Shilstone Co., H. M.
Eng'g. Div. of Railway Dept., Ministry of Communications, Peking	Societe Anonyme des Ateliers de Constructions Electriques De Et Charleroi.
Graham, Anderson, Probst and White	Sorenson, S. O.
Hart, S. M.	Southern Power Co.
Hu, K. P.	Standard Brake Shoe and Fdry. Co.
Illinois State Library	Switzer, J. A.
Indiana Portland Cement Co.	Taylor, T. D.
International Nickel Co., Huntington Works.	Thompson, F. DeC.
Johnson, C. L.	Union Tool Co.
Jumper, C. H.	Vortex Manufacturing Co.
King, Louis	Warne, C. C.
Knobloch, G. H.	Webster, E. H.
Krebs Pigment and Chemical Co.	Weirton Steel Co.
Krecker, R. H.	Western Oil Refining Co.
Kreuger, Henrik	Wood, H. R.
Lane, E. W.	Zabriskie, W. H.

Deceased Members

We announce with regret the death of two members:

CARL F. ADAM, Consulting Engineer, Union Oil Co. of California, Los Angeles, Cal. Died Feb. 12, 1922.
ALBERT L. JOHNSON, First Vice-President, Corrugated Bar Co., Buffalo, N. Y. Died July 21, 1922.

Adoption of New and Revised Standards

The letter ballot on (1) adoption of twelve tentative standards as standard, (2) revision of one standard, and (3) amendment of Article VI, Section 1, of the By-laws, ordered at the annual meeting, was canvassed August 25, 1922, by a committee of tellers consisting of Mr. W. E. Perdew and Mr. C. F. Puff, Jr., who have reported as follows:

	Aye	Nay	Not Voting
TENTATIVE STANDARDS TO BE ADOPTED AS STANDARD.			
Nickel (B 39-21 T), as revised.	101	3	386
Brass Ingot Metal, Graded and Ungraded, for Sand Castings (B 30-21 T), as revised.	100	9	390
Calced Gypsum (C 23-21 T), as revised.	62	1	427
Block for Granite Block Pavements (D 59-19 T), as revised.	82	0	408
Test for Voids in Fine Aggregate for Concrete (C 30-21 T).	165	3	322
Test for Organic Impurities in Sands for Concrete (C 40-21 T).	166	2	322
Test for Sieve Analysis of Aggregates for Concrete (C 41-21 T).	167	2	321
Sampling Stone, Slag, Gravel, Sand and Stone-Block for Use as Highway Materials, including Some Material Survey Methods (D 75-20 T).	152	0	338
Test for Flash Point by Means of the Pensky-Martens Closed Tester (D 93-21 T), as revised.	131	1	358
Test for Melting Point of Paraffin Wax (D 87-21 T).	121	4	365
Testing Molded Insulating Materials (D 48-21 T).	83	0	407
Terms Relating to Paint Specifications (D 16-21 T), as revised.	128	0	362
REVISION OF EXISTING STANDARDS.			
Test for Softening Point of Bituminous Materials Other than Tar Products (Ring-and-Ball Method) (D 36-21).	137	2	351
PROPOSED REVISION OF BY-LAWS.			
Amendment of Article VI, Section 1, of the By-Laws.	314	1	175

Total number of legal ballots cast..... 490

Special Prices Fixed for Complete Sets of Proceedings

The special prices to members for Vols. II and IV to XII, inclusive, of the PROCEEDINGS (Vols. I and III are out of print), including a complete index, have been still further reduced in the desire to dispose as quickly as possible of the stock of these back volumes. A special reduced price to members has also been placed upon a set of the PROCEEDINGS from Vols. XIII to XX (1913-1920), inclusive, with the index of these volumes now in press. The following special prices are therefore announced:

BINDING	VOLS. II AND IV-XII, INCLUDING INDEX.	VOLS. XIII-XX, INCLUDING INDEX.	COMPLETE SETS.
Paper.....	\$20	\$40	\$60
Cloth.....	25	50	75
Half-Leather.....	30	60	90

Many companies holding membership in the Society maintain technical and research libraries in which it is particularly important that there should be a complete set of our PROCEEDINGS. Companies maintaining such libraries, and indeed all members who desire a complete set of the Society's publications, are urged to place their orders with the Secretary-Treasurer, using for that purpose the enclosed order blank.

Members desiring certain individual volumes to complete their sets may obtain them at special prices.

Special Publications Placed on Sale

The following reprints from the current PROCEEDINGS are available to members at the following prices:

Preliminary Report on the Effect of Sulfur on Rivet Steel.	\$0.25
1922 Report of Committee A-5 on Corrosion of Iron and Steel, including report on Inspection of Corrosion Tests.	.50
1922 Report of Committee D-2 on Petroleum Products and Lubricants, including five tentative standards for petroleum products.	.75
A List of Alloys, compiled by William Campbell for Committee B-2 on Non-Ferrous Metals and Alloys.	1.00

List of Publications

Proceedings, Volume 22 (1922).—The PROCEEDINGS for 1922 in two parts: Part I, committee reports with discussions and new and revised tentative standards (about 950 pp.); Part II, technical papers with discussions (about 700 pp.). Ready about December 15. Prices to non-members: paper \$12, cloth \$13, half-leather \$16. To members for extra copies: \$7, \$8 and \$11, respectively.

Book of A.S.T.M. Standards.—Issued triennially. The 1921 edition (890 pp.) and the 1922 supplement (54 pp.) contain the 172 standards adopted by the Society. Prices to non-members: cloth \$11, half-leather \$12.50. To members for extra copies: \$8 and \$9.50, respectively.

Supplement to Book of Standards.—The twelve 1922 standards, forming the first supplement to the 1921 Book of A.S.T.M. Standards, are issued in a pamphlet of 54 pages. Price to non-members: \$1.25. To members for extra copies: \$1.

Book of A.S.T.M. Tentative Standards.—The 1922 edition (774 pp.) contains 163 tentative standards issued by the Society. Prices to non-members: paper \$7, cloth \$8. To members: \$4.50 and \$5.50, respectively.

Separate Standards and Tentative Standards.—Separate copies of all standards and tentative standards are available. The price is 25 cents for a single copy and in lots up to 50. Larger quantities are furnished at lower prices.

Complete Sets of Proceedings from 1902 to 1921, inclusive (with the exception of Vols. I and III). Special prices are made to members for extra copies and for complete sets. Binding in paper, cloth or half-leather.

Miscellaneous.—Volume of annual reports of Committee D-1 on Preservative Coatings for Structural Materials for the years 1903-1914 (567 pp.). Price, \$5.00 in cloth.

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AMERICAN SOCIETY FOR TESTING MATERIALS
1315 Spruce Street, Philadelphia

A.S.T.M. Committee Activities

Space in the BULLETIN is reserved for items of interest about committee activities. Officers of committees are invited to prepare information of suitable character for publication. A schedule of committee meetings for three months in advance will be published in each issue.

Revise Specifications for Plates for Forge Welding.

Committee A-1 on Steel is about to undertake a revision of the Tentative Specifications for Steel Plates for Forge Welding (A 78-21 T). Several revisions have been proposed by members of the committee. These have been referred to a special committee, appointed to undertake the revision. This committee, which is under the chairmanship of F. N. Speller, will keep in touch with what is being done on similar lines by the American Welding Society and the Boiler Code Committee of the American Society of Mechanical Engineers.

New Sub-Committee on Plate Tolerances.

The subject of permissible variations in weight and thickness of steel plates has been engaging the attention of Committee A-1 on Steel for some time. Tables of permissible variations appear in the Society's various specifications for structural, ship and boiler plate. Revisions of these requirements have been proposed, and the matter has reached a degree of importance that has led Committee A-1 to organize a new Sub-Committee on Plate Tolerances, under the chairmanship of Past-President A. A. Stevenson. The tentative personnel of the sub-committee is as follows:

NON-PRODUCERS.

American Car and Foundry Co.,	Newport News Shipbuilding and
A. E. Ostrander.	Dry Dock Co.,
American Locomotive Co.,	J. W. Gray.
E. J. Edwards.	New York Central Railroad,
Baldwin Locomotive Works,	A. W. Carpenter.
H. V. Wille.	New York, New Haven and
Baltimore and Ohio R. R.,	Hartford R. R.,
J. R. Onderdonk.	H. P. Hass.
Bureau of Construction and Re-	Pennsylvania System,
pair, U. S. N.	F. M. Waring.
Cramp and Sons Ship and En-	Pressed Steel Car Co.,
gine Bldg. Co.,	J. F. Streib.
W. A. Dobson.	

PRODUCERS.

Bethlehem Steel Co.,	Lukens Steel Co.,
H. T. Morris.	W. G. Humpton.
Carnegie Steel Co.,	Midvale Steel Co.,
J. O. Leech.	R. H. Jeffers.
Illinois Steel Co.,	Worth Steel Co.,
John Brunner.	J. L. Hughes.
Jones and Laughlin Steel Co.,	Youngstown Sheet and Tube Co.,
J. J. Shuman.	G. A. Reinhardt.

Questionnaire on Corrosion Testing

Committee B-3 on Corrosion of Non-Ferrous Metals and Alloys was organized for the purpose of improving the technique of corrosion testing of non-ferrous metals and alloys, of standardizing it so far as possible and possibly later of assembling standard data on the corrosion resistance of different non-ferrous materials. The committee held its third meeting at the Society's headquarters on October 27.

As a first step in its activity the committee authorized the circularization of a Questionnaire to elicit not only detailed information from each individual regarding his practice and experience in corrosion testing but also his opinion as to the best practice in these details. In addition, a general opinion is sought as to the direction which the further activities of the committee should take.

The committee wishes to give this Questionnaire, which is comprehensive yet directly and concisely worded, as wide-spread publicity as possible. It accordingly will welcome suggestions as to individuals or laboratories, whether or not they are members of the Society, to whom the Questionnaire might be sent. Any member interested, or in a position to suggest names of any who are interested, is requested to communicate with the secretary of the committee, Mr. Sam Tour, Metallurgist, Doehler Die Casting Co., Brooklyn, N. Y.

New Committee on Leather Belting

At a recent meeting of the Executive Committee, authority was given to organize a new standing committee on Leather Belting for Power Transmission. The possibility of organizing such a committee has been under consideration for about a year, in which time considerable interest has been evidenced by representative manufacturers of leather belting and by many industries represented in the Society that are large consumers. A tentative personnel of the committee is being prepared and the meeting for preliminary organization will be called as soon as the necessary details can be completed.

New Committee on Ferro Alloys Contemplated

The Executive Committee has also authorized the appointment of a Committee on Ferro Alloys, provided a survey of the project now being conducted by the Secretary-Treasurer is favorable. There seems to be considerable need for standard specifications for many of the ferro alloys, as well as standard methods of sampling and chemical analysis. If the interest and support of representative producers and consumers can be secured, the committee will be promptly organized. The Secretary-Treasurer will be glad to receive any suggestions from members who are interested.

New Activities Under Consideration

In recent months the Secretary-Treasurer has been studying the possibility of extending the Society's activities to include materials not heretofore investigated by the Society. A group of manufacturers has requested that the Society form a committee to prepare specifications and methods of test for magnesia and asbestos products, such as brake linings and facings, gaskets and journal box packings, insulation on steam heating pipes, asbestos millboard, etc. Certain large consumers of these products have expressed interest in the project and it is hoped that sufficient active support will be forthcoming to warrant the organization of the committee.

Another material under consideration in this connection is glue. Several members of the Society have represented to the Executive Committee the urgent need of methods for the testing and evaluation of glue. The Secretary-Treasurer is at present conferring with manufacturers of glue to secure their support of such work in the Society.

Members are cordially invited to send to the Secretary-Treasurer any suggestions or comments on the above topics.

A meeting of representatives of the Society and the A. S. M. E. Boiler Code Committee was held in New York on October 19 to review the various specifications for materials in the Code relating to A.S.T.M. specifications. The meeting was attended by Messrs. W. F. Kiesel, Isaac Harter (represented by Perry Cassidy) and J. Partington for the A. S. M. E., and Messrs E. J. Edwards, C. F. W. Rys (represented by J. O. Leech) and C. L. Warwick (represented by R. E. Hess) for the A.S.T.M. Certain revisions in A.S.T.M. specifications were suggested by the A. S. M. E. representatives and will be referred to the proper committees.

A joint committee of the Society and the American Electric Railway Association has been appointed to harmonize the requirements of the two organizations for copper trolley wire. Messrs. W. H. Bassett, H. J. Horn and C. D. Gray represent the A.S.T.M. through Committee B-1 on Copper Wire, and Messrs. H. S. Murphy, Adrian Hughes, Jr., and H. G. Burd represent the A. E. R. A.

Schedule of Committee Meetings

DATE	COMMITTEE	PLACE
November 9-10	D-9 On Insulating Materials.....	New York
November 14	D-11 on Rubber Products.....	New York
November 17	Advisory Committee, E-1 on Methods of Testing.....	Philadelphia
November 17-18	C-7 on Lime.....	Philadelphia
November 24	Advisory Committee, E-8 on Nomenclature and Definitions.....	New York
November	C-3 on Brick.....	Troy
November	D-4 on Road and Paving Materials.....	
December 5	D-2 on Petroleum Products.....	St. Louis
December 15	C-8 on Refractories.....	Pittsburgh
January 11-12	Sub-Committees of Committee A-1 on Steel.....	Philadelphia
January 16	Executive Committee.....	Philadelphia
January	D-8 on Waterproofing Materials.....	New York

Committee A-1 on Steel held a meeting in Detroit on October 6, at which the work of the sub-committees for the coming year was outlined and several important sub-committee reports received. Among important matters now under consideration are the following:

Sub-Committee VIII on Steel Castings is about to undertake a revision of the Society's present Standard Specifications for Steel Castings and has appointed a sub-sub-committee with the following personnel to investigate the subject and prepare a report:

Standard Steel Works Co., L. H. Fry (Chairman)	Egan-Rogers Steel and Iron Co., J. I. Rogers
American Foundrymen's Assoc., A. H. Jameson	General Electric Co., J. M. Darke
Bureau of Construction and Repair, U. S. N., F. B. Olcott	Westinghouse Electric and Mfg. Co., T. D. Lynch

At a recent meeting of this sub-committee certain criticisms of the Tentative Specifications for Carbon-Steel Castings for Railroads, submitted by the Bureau of Construction and Repair, U. S. N., were discussed and by action of Committee A-1 referred to the joint committee of the A.S.T.M. and the A.R.A.

There has been referred to Sub-Committee IX on Steel Tubing and Pipe the request of the Association of American Steel Manufacturers that the committee prepare specifications for oil well pipe and casing. Since it is desired to cover both steel and wrought-iron pipe, the committee will cooperate with the appropriate sub-committee of Committee A-2 on Wrought Iron.

Sub-Committee XI on Boiler Steel is giving consideration to the subjects brought up as a result of a joint meeting of the A.S.T.M. conference committee with a similar committee of the A.S.M.E. Boiler Code, as follows: (a) Marking requirements for boiler steel; (b) substitution of an increase in elongation requirement for firebox steel in lieu of an additional homogeneity test; and (c) permissible variations in dimensions and out-of-round of rivet bars.

At the Detroit meeting there was discussed the report on Ladle Test Ingot Investigation of Sub-Committee XII on Methods of Chemical Analysis. The complete report includes a number of photographs which have not yet been distributed to the committee membership. Final action on the adoption of the report has been deferred pending decision regarding the details of publishing these photographs.

Acting upon an informal report by Mr. T. D. Lynch, chairman of Sub-Committee XIII on Methods of Physical Test, which is cooperating with a sub-committee of Committee E-1 in preparing requirements for test specimens, the sense of Committee A-1 was expressed that the diameter of the present standard 2-in. tension test specimen should be retained at $\frac{1}{2}$ in.

Although Sub-Committee XIV on Tool Steel is not yet prepared to present a final report on matters now before it, Mr. J. M. Darke, chairman, reported that considerable progress has been made in the formulation of revised specifications for carbon tool steel. Through the efforts of a sub-sub-committee, under the chairmanship of Mr. L. H. Kenney, the requirements in specifications of certain representative consumers are being harmonized, and it is expected that specifications will be reported for action of the sub-committee at its January meeting. A provisional draft of the specifications contains two features not in the present tentative specifications, namely, a complete statement of purposes for which the various classes of carbon tool steels

are frequently used, and permissible variations in dimensions of various sizes of tool steels.

Sub-Committee XIX on Steel Sheets has organized three sub-sub-committees to prepare specifications for cold-rolled strip steel, for automobile sheet steel, and for galvanized roofing sheets. Quite a bit of work has been done individually on specifications for cold-rolled strip steel, a number of separate specifications having been analyzed. In the preparation of specifications for automobile sheet steel, the sub-committee is cooperating with the Society of Automotive Engineers.

Committee A-1 will be kept in touch with the work of the Sectional Committee on Standardization of Shafting, under the sponsorship of the American Society of Mechanical Engineers, through the appointment of Messrs. F. M. Waring and J. J. Shuman as representatives of the Society on this sectional committee.

Mr. E. F. Kenney presented a report of progress as representative of the committee on the Committee of the American Welding Society on Specifications for Steel to be Welded. The latter committee has made preliminary welding tests on steels of various carbon contents, from almost carbonless ingot iron to steel of 0.60 per cent carbon. Provision is being made for the maintenance of cooperative relations with the American Welding Society in the work of Committee A-1 on steels for welding purposes. Mr. F. N. Speller was appointed to serve with Mr. Kenney as a representative of Committee A-1 on the A.W.S. committee in place of Mr. H. L. Whittemore, who has been obliged to resign.

Committee A-4 on Heat Treatment of Iron and Steel held a meeting in Detroit on October 5 in connection with the annual meeting of the American Society for Steel Treating, at which the active work for the year was outlined. An effort will be made to secure the cooperation of the S.A.E. and A.S.S.T. in the formulation of definitions relating to heat treatment.

Committee A-5 on Corrosion of Iron and Steel held a meeting in Pittsburgh on October 17, at which the subject of specifications for galvanized sheets was discussed. Since this subject more properly comes under the supervision of Sub-Committee XIX on Sheet Steel and Steel Sheets of Committee A-1 on Steel, this question was turned over to that sub-committee, with the recommendation that it prepare suitable specifications. Committee A-5 is prepared to advise Sub-Committee XIX relative to the testing of galvanized coatings, and the following were appointed to serve in an advisory capacity: J. H. Gibboney, H. S. Rawdon, M. E. McDonnell and G. A. Reinhardt.

Committee B-2 on Non-Ferrous Metals and Alloys held a meeting at the Society's Headquarters on October 26. The committee is giving further consideration to the tentative specifications submitted at the recent annual meeting, particularly the Specifications for Admiralty Condenser Tubes. The appointment of a Sub-Committee on Lead Pipe and also a Sub-Committee on Metallic Fluxes and Deoxidizers was approved.

Sub-Committee II was asked to consider the desirability of drawing up specifications for hard-rolled copper rods for cold drawing.

Sub-Committee III will be engaged during the coming year in a series of cooperative tests leading to specifications for proper design of test coupon for cast non-ferrous alloys. This will include coupons for tension and compression tests as well as a comparison of the results of compression test specimens for ratios of length to diameter varying from 2 : 1 to 4 : 1 with those of the test specimens at present in use in the non-ferrous alloy specifications.

Sub-Committee VIII will cooperate with Sub-Committee III in this series of tests. Mr. E. H. Dix has made some tests of the conductivity of silicon-aluminum alloys and the committee will undertake some cooperative tests on sand-cast aluminum-silicon, aluminum-silicon-copper and duralumin alloys.

Investigational work is being done at the U. S. Bureau of Standards on tests of various alloys made from secondary metal. It is expected that this work will be concluded in time for inclusion in the committee's annual report.

Committee C-1 on Cement is gathering further data dealing with the compression test of cement, but is not yet prepared to make any recommendations because of the wide variations in the results which are being obtained.

Committee C-6 on Drain Tile is actively continuing its investigation to reduce the number of standard sizes of drain tile. The Sub-Committee on Standard Sizes under the chairmanship of G. W. Pickels, secretary of the committee, has established contact with a similar committee of the American Society of Agricultural Engineers. The sub-committee has also circulated a questionnaire among manufacturers and users of drain tile and plans to review the situation thoroughly at a meeting in the near future.

Committee C-7 on Lime will meet in Philadelphia on November 17 and 18. The sub-committees will hold meetings, followed by meetings of the main committee. On the evening of the seventeenth a joint session of the committee will be held with the Philadelphia Section of the American Chemical Society. This joint session will be addressed by W. D. Collins on "The Hardness of Large Public Water Supplies in the U. S.," and by C. P. Hoover on "The Operation of Water-Softening Plants for Public Water Supply." It is expected that these addresses will lead to some interesting and valuable discussion in open meeting.

Committee C-9 on Concrete and Concrete Aggregates is expected to carry out, through its Sub-Committee III, an investigation of the value for field purposes of transverse tests of concrete. Sub-Committee IV is carrying out a series of compression and tension tests of sand mortars. Sub-Committee V may take advantage of Cloyd M. Chapman's offer to furnish flow tables to a limited number of laboratories which would cooperate in a series of tests for consistency. It is expected that a final report will be drafted for inclusion in the annual report of the committee for 1923 on the cooperative investigation on accelerators inaugurated by Sub-Committee XI last year. Sub-Committee IX proposes to prepare for presentation at the next annual meeting of the Society specifications for fine concrete aggregates. It also proposes to review the present methods of judging the value of a fine aggregate in the manufacture of concrete and prepare recommendations for future action of Committee C-9.

Committee C-11 on Gypsum met in Washington on October 26 and 27 to receive sub-committee reports and to plan the year's activities.

Among the matters of special importance there might be mentioned: the discussion on the use of anhydrite gypsum in the manufacture of portland cement, the adoption of tentative specifications for crushed gypsum, a discussion of the acoustic properties of gypsum plasters, the development of tentative specifications for color of finishing plasters, and of specifications for gypsum partition and furring. A "slump" test machine has been submitted by a member of the committee to the U. S. Bureau of Standards for criticism. The Sub-Committee on Nomenclature presented a report on the preparation of additional tentative definitions to cover gypsum building products. The Sub-Committee on Fire Resisting Properties of Gypsum Products arranged for a discussion of its program on fire tests of light interior (non-bearing) partition constructions, in which lime, cement and gypsum materials will be used.

Committee D-1 on Preservative Coatings for Structural Materials held a meeting at the Society's headquarters on October 3, at which the activities of the sub-committees were reported as follows:

Sub-Committee III on Testing of Paint Vehicles will carry on work on a number of oils which have not yet been included in standards or tentative standards of the Society.

Sub-Committee V on Linseed Oil intends to work on the determination of foots in linseed oil, using the present tentative method as well as a new method suggested by Mr. George Sutherland. The sub-committee also plans work on the relation between the Hanus and Wijs method for determination of iodine number.

Sub-Committee IX on Varnish is continuing durability tests on varnish. Reports received so far are inconsistent and the sub-committee will try to work out more accurate test methods.

Sub-Committee XV on Specifications for Pigments is considering revisions in the present tentative specifications and is formulating additional specifications for pigments.

Sub-Committee XVIII on Physical Properties of Paint Materials has prepared several samples which will be distributed for the work of the sub-committee.

Sub-Committee XXIII on Anti-Fouling Paints has immersed further test plates at Raritan Bay, N. J., at Norfolk, Va., and at Beauford, N. C. Two inspections have been made during the summer on each set of panels. It is hoped that next year the most promising compositions may be tested by applying them to the hulls of Navy vessels, Shipping Board vessels and privately owned vessels.

In order to stimulate interest in the meetings of the committee, Mr. G. W. Thompson was requested to undertake the preparation of a program on color for the next meeting.

Committee D-5 on Coal and Coke is cooperating with the American Chemical Society's Committee on Coal Analysis. A joint meeting of the Sub-Committee on Testing, of Committee D-5, with the American Chemical Society's committee was held in Pittsburgh on September 6, at which the sub-committees were authorized to study the following subjects: Laboratory Method of Sizing Pulverized Coal; Porosity of Coke; Combustibility of Coke; and Fusibility of Coal Ash.

Committee D-9 on Electrical Insulating Materials will hold its regular fall meeting in New York City on November 10. During the summer the committee received from the British Electrical and Allied Industries Research Association a report commenting in detail upon the A.S.T.M. method for determining the electric strength of transformer and switch oils prepared by Committee D-9 and accepted as tentative by the Society in 1921. This Association also transmitted directions for determining the electric strength of fibrous insulating materials, which has a bearing on the work of one of the sub-committees of Committee D-9. These comments, indicating that the work of our Society is being followed abroad with much interest, have been received with appreciation by the committee and are being carefully studied in the appropriate sub-committees.

Committee D-10 on Shipping Containers held a meeting at Atlantic City on June 28 at which it was suggested that the present Sub-Committee on Wirebound Containers be charged with the preparation of specifications for crates of a wirebound type, and further that a sub-committee be created to study the construction of nailed and bolted wooden crates.

Committee D-11 on Rubber Products is making efforts to secure joint action with the sub-committee of the Signal Section of the American Railway Association for the purpose of perfecting the tape specifications. The tape specifications have already been adopted by the Committee on Electricity of the American Railway Engineering Association as recommended practice.

Committee E-4 on Metallography met in Philadelphia on October 28. The committee is now working on the extension of its Tentative Methods of Metallographic Testing of Iron and Steel to include Non-Ferrous Metals and Alloys. A new Sub-Committee on Micro-hardness has been appointed. This sub-committee will give particular attention to a new metallographic tool known as the "micro-character" for testing the hardness of micro-constituents.

